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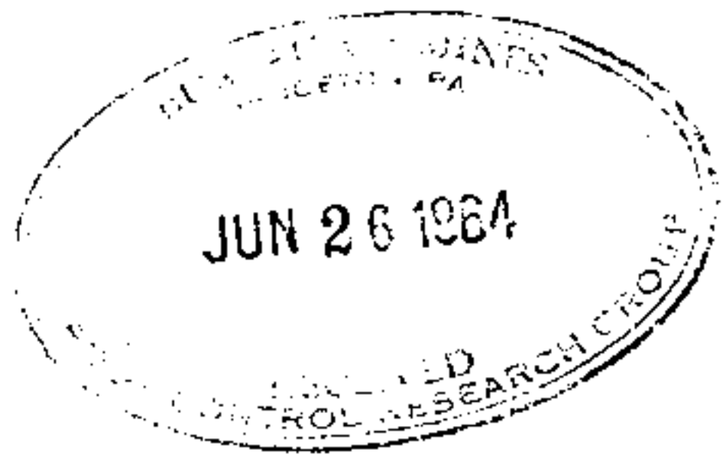
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DISTRICT H



REPORT OF MULTIPLE FATAL COAL-MINE BUMP ACCIDENT SUNNYSIDE NO. 1 MINE KAISER STEEL CORPORATION SUNNYSIDE, CARBON COUNTY, UTAH

June 3, 1964

by

Thomas T. Reay, Jr.
Coal Mine Inspector

and

Emmanuel J. Grillos
Mining Health and Safety Engineer

Originating Office - Bureau of Mines
1600 East First South, Salt Lake City, Utah 84112
L. D. Knill, Subdistrict Supervisor
Salt Lake City, Utah, Subdistrict, Health and Safety District H

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INTRODUCTION

This report is based on an investigation made in accordance with provisions of the Federal Coal Mine Safety Act (66 Stat. 692; 30 U.S.C. Secs. 451-483).

A coal outburst, or bump, which resulted in fatal injuries to Leland Huntsman and Morris Marzo, and minor injuries to Philip Pero, occurred about 3:50 p.m. Wednesday, June 3, 1964, in No. 9 room 11 left of the Sunnyside No. 1 mine, Kaiser Steel Corporation, Sunnyside, Carbon County, Utah.

Coal and rock that fell from the right rib during recovery operations slightly injured four rescue workers.

Leland Huntsman, age 49, was employed 9 years by this company as a loading-machine operator and had 15 years of mining experience. He is survived by his widow and 3 dependent children. Morris Marzo, age 46, was employed 15 years by this company, the last year as a continuous-miner operator, and had 19 years of mining experience. He is survived by his widow.

Philip Pero, mechanic, and eyewitness, was bruised about the head and body by falling rock and flying coal but was transported to the surface unassisted.

The Price office of the Bureau of Mines was notified of the occurrence about 4:40 p.m., June 3, 1964, by a telephone call from Frank Markosek, superintendent, Sunnyside Nos. 2 and 3 mines. Thomas T. Reay, Jr., coal mine inspector, was contacted about 4:45 p.m. by Joe Freeman, supervising coal mine inspector, and was instructed to proceed to the mine.

Information for this report was obtained from observations made during the recovery operations, an inspection of the accident area and information furnished by company officials, employees, and the eye-witness.

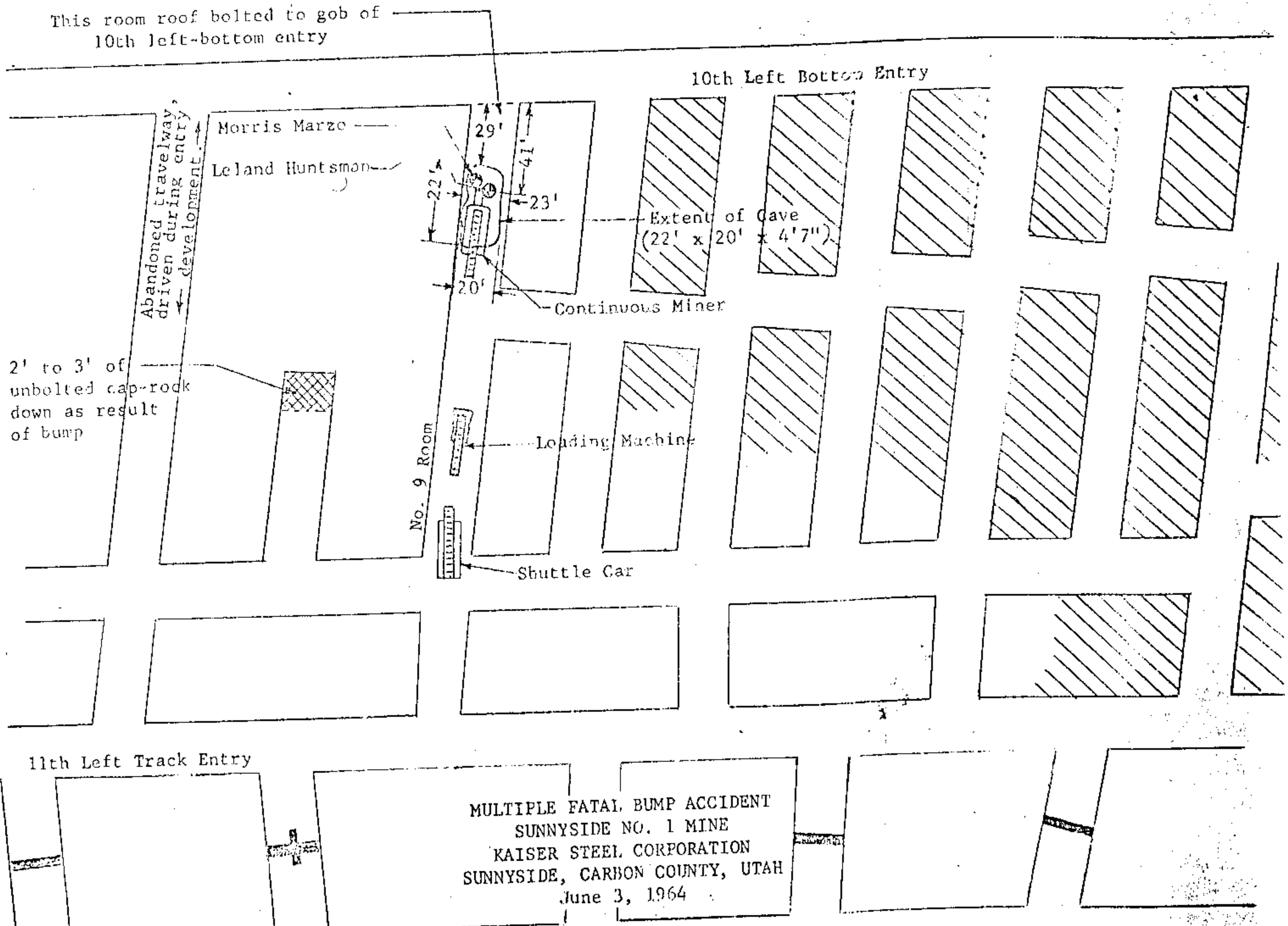
GENERAL INFORMATION

The Sunnyside No. 1 mine, Kaiser Steel Corporation, is at Sunnyside, Carbon County, Utah, on State Highway No. 123.

The mine was opened by 7 slopes, 3 air shafts, a 1,700-foot long rock tunnel that intersected the coalbed, and 2 drifts driven from the raise sections to the surface. Development is in the Upper and Lower Sunnyside coalbeds, which range from 5-1/2 to 11 feet, and 6 to 14 feet in thickness, respectively. The coalbeds dip from 4 to 12 degrees northeasterly. The coal is of high-volatile bituminous rank and the coal dust is highly explosive. A total of 213 men was employed, of which number 90, 73, and 18 worked underground on the day, afternoon, and midnight shifts, respectively, and 32 worked on the surface. The average daily production of 4,647 tons of coal was loaded into cable-reel shuttle cars with mobile loading machines. Coal was mined with ripper-type continuous miners. The mine was operated 1 maintenance and 2 coal-producing shifts a day, 5 days a week.

Coal is mined by the room-and-pillar, and panel-and-entry systems of mining. Pillars were recovered by the split-and-pocket method. Slopes were driven in sets of 3 to 7; cross entries were driven in sets of 2; and crosscuts, other than in room entries, were driven on 100-foot centers. Cross entries and crosscuts were driven 18 to 20 feet wide and rooms were driven about 22 feet wide.

The immediate roof overlying the Upper coalbed consisted of shale with streaks of bony coal. The stratum between the coalbeds consisted of shale and bony coal ranging from a featheredge to 8 feet in thickness. The overburden in some areas was about 2,000 feet. Systematic methods of roof support were adopted and followed. Yieldable steel arches were installed on 3-foot centers at various places throughout the mine. The voids over the arches were filled with minus 1/4-inch incombustible material by the hydraulic method or with wooden cribbing. Backfilling of worked-out areas and voids over yieldable steel arches, with minus 1/4-inch incombustible material pumped underground from the surface, was in progress. This method of roof support was used to counteract the severe bumps that occur frequently in this mine. Other methods of roof support adopted for this mine consisted of wooden cribs and the installation of crossbars or props with suitable cap pieces in conjunction with roof bolts. Roof bolts were installed in accordance with an adopted plan,



MULTIPLE FATAL BUMP ACCIDENT
SUNNYSIDE NO. 1 MINE
KAISER STEEL CORPORATION
SUNNYSIDE, CARBON COUNTY, UTAH
June 3, 1964

approved by the Bureau of Mines February 25, 1963. The adopted methods appeared to be adequate at the conclusion of the preceding inspection.

The investigation committee consisted of:

KAISER STEEL CORPORATION

John Peperakis	Manager, Sunnyside Coal Mines
Thomas McCourt	Superintendent
Nick Tallerico	Mine Foreman
Walter Jones	Night Mine Foreman
Donald Ross	Mine Foreman, No. 3 mine
Vaun O'Neil	Section Foreman
Clarence Self	Safety Engineer
Bruno Dalla Corte	Underground Master Mechanic
Philip Pero	Mechanic

INDUSTRIAL COMMISSION OF UTAH

Steve Hatsis	Inspector, Coal Mines
Frank Ularich	Inspector, Coal Mines

UNITED MINE WORKERS OF AMERICA

Frank Sacco	President, Local Union 9958
Henry Brownfield	Vice President, Local Union 9958
Emmett McFadden	Member, Mine Safety Committee
Gene Trabue	Member, Mine Safety Committee

UNITED STATES BUREAU OF MINES

Thomas T. Reay, Jr.	Coal Mine Inspector
Emmanuel J. Grillos	Mining Health and Safety Engineer

Details concerning this accident are shown in the sketch.

The preceding inspection of this mine was made April 6-10, and 13-16, 1964.

DESCRIPTION OF ACCIDENT

The day-shift crew departed from the 11 left working section about 2:30 p.m. Wednesday, June 3, 1964. Conditions at that time appeared to be normal. The day shift section foreman reported on the surface between change of shifts to the night shift section foreman, that conditions in the 11 left working section were normal and that No. 9 room had broken through to the 10 left bottom entry. In addition,

the shuttle cars, loading machine and continuous miner had been pulled back from the face and were ready to be moved to the chain pillar inby the end of the track in the main entry.

The night shift entered the mine about 3:15 p.m., and the crew of men working in 11 left entry arrived at their section about 3:40 p.m. The section foreman inspected the top entry, No. 10 room, No. 9 room, and while coming out of No. 9 room he met Morris Marzo, continuous miner operator, Leland Huntsman, loading-machine operator, and Philip Pero, mechanic, going into No. 9 room. The section foreman then started inspecting the chain pillar which was to be extracted. Marzo and Huntsman went to the head of the continuous-mining machine, which had been pulled back from the face about 41 feet after the day shift had "holed through" into the abandoned (caved) bottom entry of 10 left.

Philip Pero, mechanic, and eyewitness, stated that he greased the planetary gear, which is 15 feet to the rear of the miner head, then removed the plug from the transmission case and checked the oil. It was assumed that Huntsman and Marzo were checking the bits on the miner cutter bar. About this time the first bump occurred and Pero heard one of his fellow workers shout "Let's get out of here!" A second bump occurred and the place caved before the men could move. A third bump immediately followed the second. While running out of the room, Pero looked back but did not see any lights. He assumed that the victims were under the cave. The section foreman, who was in the chain pillar area, proceeded through the dense cloud of dust to the continuous miner. He was unable to find Huntsman or Marzo, and returned to the loading station where he met Pero, and Torres, a shuttle-car operator. The section foreman telephoned to the surface and notified Nick Tallerico, mine foreman, of the occurrence, and then proceeded with rescue operations. Straight props with large cap pieces were set on each side of the shuttle-car roadway and wooden cribs were installed on top of the continuous miner, along the right rib, and on top of the cave as the rescue operations progressed. The fallen rock and coal were removed from No. 9 room with a loading machine, as far as the head of the continuous miner.

The right rib of No. 9 room sloughed and injured 4 men about 10:30 p.m., while the workmen were removing the rock and coal from around the head of the continuous miner with hand picks and shovels. The injured men were given first aid and taken to the hospital at Dragerton, Utah. An examination by a doctor at the hospital disclosed that one man had a broken rib on the right side and bruises, another had bruises and a small bone broken in his left foot, and the other two had only bruises. The two men with bruises only were released from the hospital after the examination. Recovery work continued and about 12:30 a.m., the body of Leland Huntsman was recovered, and later the same day, at 1:20 a.m., the body of Morris Marzo was recovered, and all persons

left the mine.

The investigation was started at 1 p.m., Thursday, June 4, 1964. The roof in No. 9 room was supported with 1-inch wedge-type roof bolts, 6 feet in length, installed on 4-foot centers. Metal mats were used in conjunction with 3/8-inch thick by 8-inch square steel bearing plates. The bolts extended at least 18 inches into the main roof. The inby edge of the caved section was 29 feet outby the face of No. 9 room of 11 left and was 22 feet long and 20 feet wide. The caved section was about 55 inches thick and consisted of 31 inches of rock overlain by 24 inches of coal. The victims were knocked onto the cutterhead of the continuous-mining machine and probably were killed instantly.

CAUSE OF ACCIDENT

This accident was caused by severe bumps which dislodged roof rock and coal.

RECOMMENDATIONS

Coal-mine bumps apparently are unsolved problems of coal mining; therefore, specific recommendations cannot be offered at this time that might prevent accidents of a similar nature. However, it was suggested at the meeting held after the investigation, and agreed to by management, that straight props with suitable cap pieces should be set on 8-foot centers along each side of the shuttle-car roadways, in conjunction with roof bolts. Signs of stress might be indicated on the props and serve as a warning to the workmen and officials.

ACKNOWLEDGMENT

The cooperation of company officials and employees, officials of the United Mine Workers of America, and the representatives of the Industrial Commission of Utah, is gratefully acknowledged.

Respectfully submitted,

/s/ Thomas T. Reay, Jr.

Thomas T. Reay, Jr.
Coal Mine Inspector

/s/ Emmanuel J. Grillos

Emmanuel J. Grillos
Mining Health and Safety Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
HEALTH AND SAFETY ACTIVITY

Subdistrict Office

1600 East First South
Salt Lake City, Utah 84112
June 23, 1964

File No. 440

Mr. John Peperakis, Manager
Sunnyside Coal Mines
Sunnyside, Utah

Subject: Special investigation, bump occurrence
Sunnyside No. 1 mine
Kaiser Steel Corporation
Sunnyside, Carbon County, Utah
June 16, 1964
Thomas T. Reey, Jr.

Dear Mr. Peperakis:

The enclosed memorandum covers a Federal investigation of a bump occurrence in the above-named mine, made pursuant to the provisions of the Federal Coal Mine Safety Act (66 Stat. 692; 30 U.S.C. 451-483).

Any comments you desire to make regarding the investigation or memorandum will be appreciated.

Sincerely yours,

L. D. Knill

L. D. Knill
Subdistrict Supervisor

Enclosure

cc:
(1) Assistant Director - Health & Safety (2) Mason, Roof Control (3) Chief,
J. Howard Bird
Research Director
Chief, Roof Control Res. Group
Price
Files